TECHNET
THE VOICE OF THE
INNOVATION ECONOMY

TechNet Southeast | Telephone 512.689.1050
www.technet.org | @TechNetUpdate

August 31, 2020

The Honorable Rafael Anchía
Chair, Committee on International Relations & Economic Development
Texas House of Representatives
Texas Capitol, Room 1N.5
Austin, Texas 78701

RE: Interim Charge Two

Dear Chairman Anchía:

I write on behalf of TechNet to help inform the House Committee on International Relations & Economic Development on Interim Charge Two, which asks the Committee to examine Texas' current and future workforce pipeline structure and provide recommendations to enhance career path options. TechNet is the national, bipartisan network of technology CEOs and senior executives that promotes the growth of the innovation economy by advocating a targeted policy agenda at the federal and 50-state level. TechNet's diverse membership includes dynamic American businesses ranging from startups to the most iconic companies on the planet and represents more than three million employees in the fields of information technology, e-commerce, clean energy, gig and sharing economy, venture capital, and finance.

With global economic leadership at stake, education and workforce development are more critical than ever. TechNet supports policies that help prepare our students to be a successful part of a global, interconnected, and technology-driven economy.

Today and looking to the future, computing is a foundational skill for K-12 students. Developing students' computational and critical thinking skills teaches them how to create – not just use – new technologies. These skills will benefit students in every subject, in the and beyond. Computer science and coding skills are also in strong demand in the job market. There are almost 40,000 open computing jobs in Texas alone, with a median salary of $94,779 — almost double the statewide median salary. Despite these opportunities, Texas had only 4,160 bachelor's degrees in computer science in 2018.

In Texas and across the country, computer science is driving job growth and innovation. Computer science skills are in high demand in the job market; in fact, more than half of projected jobs in STEM fields are in computing occupations, and computer science is one of the most desirable degrees for new college graduates.

Due to the breadth of the technology industry, there are numerous key growth areas. In addition to computer science, the innovation economy would benefit from a focus on computer programming, app development, engineering, data science, and data management. In order to further build out those pipelines, TechNet recommends the following:

Driving innovation in the classroom
Funding digital learning resources and technology integration in student learning environments to improve student outcomes and enable college and career readiness. In particular, TechNet supports championing hands-on, project-based learning to drive collaboration, creativity, communication, and critical thinking skills. In order to do this, there must be consistent efforts to secure stable funding for digital education, aligned with a statewide vision to expand and promote digital innovation in the classroom. Additionally, the state must focus on measures that focus finances, partnerships, and strategies to ensure that all schools have sufficient infrastructure and secure network connectivity with the necessary speed, capacity, flexibility of choice, and reliability to support "smart" classrooms and provide sustained information technology support to maintain and upgrade systems.

Recruiting and developing qualified teachers
One of the biggest challenges to expanding access to computer science is the lack of trained and certified computer science teachers. We need to train K-8 teachers to effectively teach coding, computational thinking, and cybersecurity skills and incentivize high school teachers to become certified to teach computer science in order to help fill these gaps. Last session, HB 3069 by Rep. Mary González would have provided dedicated funding for a statewide professional development network which focuses on K-8 teacher professional development in technology applications, computer science, coding, programming, and computational thinking to lay the foundations for more advanced study in high school. The bill would also have incentivized high school teachers to become certified in teaching computer science. While the bill did not pass, TechNet will continue to look to efforts like HB 3069 in order to grow the workforce of the future right here in Texas.

Expanding access and inspiring students
TechNet supports increasing access for students to high-level STEM, computer science, information technology, and coding courses, with a focus on underrepresented female and minority students. Early and broad exposure for students will help, and we therefore recommend ensuring that principles of computer science, computational thinking, communication, and STEM skills are integrated, where possible, in other subjects of K-12 instruction. Additionally, we support school and public/private programs that inspire the next generation of students to pursue STEM and computer science and IT careers, and educate parents about opportunities in these fields.

TECHNET
THE VOICE OF THE
INNOVATION ECONOMY

Promoting retraining and reskilling
TechNet also supports lifelong learning, retraining, and reskilling policies and programs that allow workers to attain the education and skills they need to stay current and advance their careers as jobs evolve. Given the economic upheavals associated with the ongoing pandemic, additional state funding to assist impacted workers with retraining and reskilling will ensure their ability to compete in the 21st century economy.

TechNet looks forward to working with the Committee and its members this upcoming session and beyond.

Sincerely,

David Edmonson
Executive Director, Texas & Southeast